

## REMARKS

### **I. Objections to the Specification:**

The Examiner objects to the specification for failing to properly cross-reference related applications and for failing to accurately describe the figures. The specification has been amended to include reference to U.S. Patent No. 6,383,758, which issued from U.S. Application No. 09/227,725.

In regards to the Examiner's objection to the figures, applicants respectfully direct the Examiner's attention to the Preliminary Amendment filed co-currently with the filing of this application on February 8, 2002 in which, the applicants amended the specification as currently requested by the Examiner. Acknowledgment of the Preliminary Amendment and withdrawal of the present objection is earnestly solicited.

## II. Status of the Claims:

Claims 1-6 have been cancelled, claims 18 through 23 have been withdrawn as directed to non-elected subject matter. Therefore claims 7 through 17 are currently pending and at issue in this application.

By this amendment claims 7, and 12 through 15 have been amended. Claim 7 has been amended to clarify that the mutant presenilin protein, or functional fragment thereof binds the armadillo protein. Support for the present amendment is found in the specification, for example, at page 9, lines 8 through 24. Claims 12 and 13 have been amended to clarify that the recited amino acid positions correspond to the wild-type human PS1 sequence defined by SEQ ID NO: 1. Support for the amendment is found in the specification at page 4, lines 9 through 12. Claims 14 and 15 have been amended to recite the amino acid positions correspond to the wild-type human PS2 sequence defined by SEQ ID NO: 2. Support for the amendment is found in the specification at page 4, lines 12 through 16, for example.

Applicants submit that the present amendments do not introduce any new matter to the specification.

### III. Claim Rejections:

The Examiner has rejected claims 7 through 17 under 35 U.S.C. §112, second paragraph, as allegedly indefinite. Applicant's respectfully traverse the present rejection, and request reconsideration in view of the present remarks and amendments.

Regarding claim 7, the Examiner maintains that it is unclear whether the mutant presenilin protein is capable of binding the armadillo protein. Without conceding the correctness of the Examiner's rejection, claim 7 has been amended to clarify that both the mutant presenilin protein and a fragment thereof are capable of binding the armadillo protein.

Additionally, the Examiner maintains that the term "mutant presenilin protein" renders the claims indefinite as it is unclear what constitutes a "normal" presenilin protein. Applicants' submit that the phrase "mutant presenilin protein" is not indefinite because one of ordinary skill would readily appreciate that the phrase means a wild-type presenilin protein, having a mutation. The term "mutant" has been assigned its ordinary meaning, e.g. a polypeptide sequence having at least one substitution, addition or deletion, relative to the wild type protein. *See, e.g.*, page 7, lines 3 through 5. Additionally, applicants' have provided several embodiments of mutant presenilin proteins in the specification that are illustrative of the present invention. *See, e.g.*, page 6, line 22 through page 7, line 7 and U.S. Application No. 08/888,077 (now U.S. Patent No. 6,020,143) which is incorporated by reference in the present application. Therefore, the term "mutant presenilin protein" is defined with sufficient particularity in the specification, that one of ordinary skill would be appraised of its scope and meaning.

The Examiner also maintains that the amino acid sequences of claims 12 through 15 do not define the scope of the invention with sufficient particularity, as the corresponding amino acids may vary depending upon the length of the mutant protein. Without conceding the correctness of the Examiner's rejection, claims 12 and 13 have been amended to recite that the amino acid positions correspond to the wild-type human PS1 sequence defined by SEQ ID NO:1. Similarly, claims 14 and 15 to recite that the

amino acid positions correspond to the wild-type human PS2 sequence defined by SEQ ID NO: 2. The present amendments are believed to clarify what is already intrinsic to the claims and therefore address and overcome the present rejection.

The Examiner has rejected claim 9 as indefinite as the acronym hNPRAP is not defined in the specification. Attached is a 1997 article which defines the acronym and demonstrates that it had a common meaning in the art at the time the application. *See, Paffenhoiz, R. and Franke, W. (1997) Differentiation 61:293-304 (Tab 1, at Abstract).*

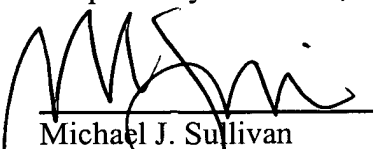
The Examiner has also rejected claim 17 as indefinite for lack of antecedent basis. The Examiner maintains that the phrase "said control" lacks antecedent basis in claim 7. The Examiner's rejection is not well taken as claim 7 clearly recites "a control" in step (d), thus providing an antecedent basis for "said control" of claim 17.

The present amendments and remarks are believed to address and overcome the Examiner's rejection of claims 7 through 17 as indefinite. Therefore, applicants respectfully request withdrawal of the present rejections.

#### **IV. Conclusion:**

Early and favorable consideration of this response and the claims is earnestly solicited. If there are any other issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

Respectfully submitted,



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